



SEQUENCE LISTING

<110> Lou, Ying
Xu, Xiang
Leo, Cindy
Huang, Betty
Shen, Mary

<120> NOVEL IAPS ASSOCIATED CELL CYCLE PROTEINS, COMPOSITIONS
AND METHODS OF USE

<130> RIGL-008CIP

<140> US 09/715,725

<141> 2000-11-16

<150> US 09/442,013

<151> 1999-11-17

<160> 20

<170> PatentIn Ver. 2.1

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<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Lys	Glu	Tyr	Ser	Asp	Asp	Lys	Val	Gln	Leu	Ala	Met	Gln	Thr	Tyr	Glu																		
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Glu	Ala	Asp	Leu	Lys	Asp	Lys	Met	Glu	Gly	Ser	Asp	Phe	Glu	Ser	Ser																		
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Lys	Lys	His	Lys	Gly	Gly	Ser	Glu	Phe	Thr	Asp	Thr	Ile	Leu	Ser	Val																		
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Tyr	Cys	Leu	Cys	His	Gln	Val	Ser	Tyr	Gly	Glu	Met	Ile	Gly	Cys	Asp																		
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			180					185					190																				
Thr	Thr	Lys	Pro	Lys	Gly	Lys	Trp	Phe	Cys	Pro	Arg	Cys	Val	Gln	Glu																		
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<210> 3

<211> 807

<212> DNA

<213> Homo sapiens

<400> 3

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cccgtggacc caaacgaacc cagctactgc ctgtgccacc aggtctccta tggggagatg 720
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 35 40 45
 Ala Glu Tyr Ile Ser Thr Val Lys Thr Leu Ser Pro Asp Gln Arg Val
 50 55 60
 Glu Arg Leu Gln Lys Ile Gln Asn Ala Tyr Ser Lys Cys Lys Glu Tyr
 65 70 75 80
 Ser Asp Asp Lys Val Gln Leu Ala Met Gln Thr Tyr Glu Met Val Asp
 85 90 95
 Lys His Ile Arg Arg Leu Asp Ala Asp Leu Ala Arg Phe Glu Ala Asp
 100 105 110
 Leu Lys Asp Lys Met Glu Gly Ser Asp Phe Glu Ser Ser Gly Gly Arg
 115 120 125
 Gly Leu Lys Lys Gly Arg Gly Gln Lys Glu Lys Arg Gly Ser Arg Gly
 130 135 140
 Arg Gly Arg Arg Thr Ser Glu Glu Asp Thr Pro Lys Lys Lys Lys His
 145 150 155 160
 Lys Gly Gly Ser Glu Phe Thr Asp Thr Ile Leu Ser Val His Pro Ser
 165 170 175
 Asp Val Leu Asp Met Pro Val Asp Pro Asn Glu Pro Thr Tyr Cys Leu
 180 185 190
 Cys His Gln Val Ser Tyr Gly Glu Met Ile Gly Cys Asp Asn Pro Asp
 195 200 205
 Cys Pro Ile Glu Trp Phe His Phe Ala Cys Val Asp Leu Thr Thr Lys
 210 215 220
 Pro Lys Gly Lys Trp
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<210> 5
 <211> 807
 <212> DNA
 <213> Homo sapiens

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 ggagcaagag tcactccaca agactctgga ggctgatag gtatcgagaa ccttccctgc 180

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cagcgcggtg agcgccctgca gaagatccag aacgcctaca gcaagtgcaa ggaatacagt 360
gacgacaaag tgcagctggc catgcagacc tacgagatgg tggataaaca cattcgaagg 420
cttgatgcag acctggcgcg ctttgaagca gatctgaagg acaagatgga gggcagtgat 480
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cccgctggacc caaacgaacc cacgtactgc ctgtgccacc aggtctccta tggggagatg 720
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<210> 6
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 <212> PRT
 <213> Homo sapiens

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Leu Asp Gln Arg Thr Glu Asp Lys Lys Ala Glu Ile Asp Ile Leu Ala
      35              40              45

Ala Glu Tyr Ile Ser Thr Val Lys Thr Leu Ser Pro Asp Gln Arg Val
      50              55              60

Glu Arg Leu Gln Lys Ile Gln Asn Ala Tyr Ser Lys Cys Lys Glu Tyr
      65              70              75              80

Ser Asp Asp Lys Val Gln Leu Ala Met Gln Thr Tyr Glu Met Val Asp
      85              90              95

Lys His Ile Arg Arg Leu Asp Ala Asp Leu Ala Arg Phe Glu Ala Asp
      100             105             110

Leu Lys Asp Lys Met Glu Gly Ser Asp Phe Glu Ser Ser Gly Gly Arg
      115             120             125

Gly Leu Lys Lys Gly Arg Gly Gln Lys Glu Lys Arg Gly Ser Arg Gly
      130             135             140

Arg Gly Arg Arg Thr Ser Glu Glu Asp Thr Pro Lys Lys Lys Lys His
      145             150             155             160

Lys Gly Gly Ser Glu Phe Thr Asp Thr Ile Leu Ser Val His Pro Ser
      165             170             175

Asp Val Leu Asp Met Pro Val Asp Pro Asn Glu Pro Thr Tyr Cys Leu
      180             185             190

Cys His Gln Val Ser Tyr Gly Glu Met Ile Gly Cys Asp Asn Pro Asp
      195             200             205

Cys Pro Ile Glu Trp Phe His Phe Ala Cys Val Asp Leu Thr Thr Lys
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Pro Lys Gly Lys Trp
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<210> 7
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<212> DNA
<213> Homo sapiens

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gcgaacttca gaggaacttc cagctgatgc gagagctgga ccagaggacg gaagataaga 240
aagcagagat tgacatcctg gctgcagagt acatctccac ggtgaagacg ctgtctccag 300
accagcgcgt ggagcgcctg cagaagatcc agaacgccta cagcaagtgc aaggaatata 360
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<212> PRT
<213> Homo sapiens

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35 40 45
Ala Glu Tyr Ile Ser Thr Val Lys Thr Leu Ser Pro Asp Gln Arg Val
50 55 60
Glu Arg Gln Gln Lys Ile Gln Asn Ala Tyr Ser Lys Cys Lys Glu Tyr
65 70 75 80
Ser Asp Asp Lys Val Gln Leu Ala Met Gln Thr Tyr Glu Met Val Asp
85 90 95
Lys His Ile Arg Arg Leu Asp Ala Asp Leu Ala Arg Phe Glu Ala Asp
100 105 110
Leu Lys Asp Lys Met Glu Gly Ser Asp Phe Glu Ser Ser Gly Gly Arg
115 120 125
Gly Leu Lys Lys Gly Arg Gly Gln Lys Glu Lys Arg Gly Ser Arg Gly
130 135 140

Arg Gly Arg Arg Thr Ser Glu Glu Asp Thr Pro. Lys Lys Lys Lys His
 145 150 155 160
 Lys Gly Gly Ser Glu Phe Thr Asp Thr Ile Leu Ser Val His Pro Ser
 165 170 175
 Asp Val Leu Asp Met Pro Val Asp Pro Asn Glu Pro Thr Tyr Cys Leu
 180 185 190
 Cys His Gln Val Ser Tyr Gly Glu Met Ile Gly Cys Asp Asn Pro Asp
 195 200 205
 Cys Pro Ile Glu Trp Phe His Phe Ala Cys Val Asp Leu Thr Thr Lys
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 Pro Lys Gly Lys Trp Phe Cys Pro Arg Cys Val Gln Glu Lys Arg Lys
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 Lys Lys

<210> 9
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 <212> DNA
 <213> Homo sapiens

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 <211> 199
 <212> PRT
 <213> Homo sapiens

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 35 40 45

Lys Glu Tyr Ser Asp Asp Lys Val Gln Leu Ala Met Gln Thr Tyr Glu
 50 55 60
 Met Val Asp Lys His Ile Arg Arg Leu Asp Ala Asp Leu Ala Arg Phe
 65 70 75 80
 Glu Ala Asp Leu Lys Asp Lys Met Glu Gly Ser Asp Phe Glu Ser Ser
 85 90 95
 Gly Gly Arg Gly Leu Lys Lys Gly Arg Gly Gln Lys Glu Lys Arg Gly
 100 105 110
 Ser Arg Gly Arg Gly Arg Arg Thr Ser Glu Glu Asp Thr Pro Lys Lys
 115 120 125
 Lys Lys His Lys Gly Gly Ser Glu Phe Thr Asp Thr Ile Leu Ser Val
 130 135 140
 His Pro Ser Asp Val Leu Asp Met Pro Val Asp Pro Asn Glu Pro Thr
 145 150 155 160
 Tyr Cys Leu Cys His Gln Val Ser Tyr Gly Glu Met Ile Gly Cys Asp
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 Asn Pro Asp Cys Pro Ile Glu Trp Phe His Phe Ala Cys Val Asp Leu
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 Thr Thr Lys Pro Lys Gly Lys
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<210> 11
 <211> 279
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Lys Glu Leu Asp Glu Cys Tyr Glu Arg Phe Ser Arg Glu Thr Asp Gly
 50 55 60
 Ala Gln Lys Arg Arg Met Leu His Cys Val Gln Arg Ala Leu Ile Arg
 65 70 75 80
 Ser Gln Glu Leu Gly Asp Glu Lys Ile Gln Ile Val Ser Gln Met Val
 85 90 95
 Glu Leu Val Glu Asn Arg Thr Arg Gln Val Asp Ser His Val Glu Leu
 100 105 110
 Phe Glu Ala Gln Gln Glu Leu Gly Asp Thr Val Gly Asn Ser Gly Lys
 115 120 125

Val Gly Ala Asp Arg Pro Asn Gly Asp Ala Val Ala Gln Ser Asp Lys
 130 135 140
 Pro Asn Ser Lys Arg Ser Arg Arg Gln Arg Asn Asn Glu Asn Arg Glu
 145 150 155 160
 Asn Ala Ser Ser Asn His Asp His Asp Asp Gly Ala Ser Gly Thr Pro
 165 170 175
 Lys Glu Lys Lys Ala Lys Thr Ser Lys Lys Lys Lys Arg Ser Lys Ala
 180 185 190
 Lys Ala Glu Arg Glu Ala Ser Pro Ala Asp Leu Pro Ile Asp Pro Asn
 195 200 205
 Glu Pro Thr Tyr Cys Leu Cys Asn Gln Val Ser Tyr Gly Glu Met Ile
 210 215 220
 Gly Cys Asp Asn Asp Glu Cys Pro Ile Glu Trp Phe His Phe Ser Cys
 225 230 235 240
 Val Gly Leu Asn His Lys Pro Lys Gly Lys Trp Tyr Cys Pro Lys Cys
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<210> 12
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 <213> Homo sapiens

<400> 12
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 35 40 45
 Leu Thr Arg Gly Trp Gly Arg Ala Trp Pro Trp Lys Gln Ile Leu Lys
 50 55 60
 Glu Leu Asp Glu Cys Tyr Glu Arg Phe Ser Arg Glu Thr Asp Gly Ala
 65 70 75 80
 Gln Lys Arg Arg Met Leu His Cys Val Gln Arg Ala Leu Ile Arg Ser
 85 90 95
 Gln Glu Leu Gly Asp Glu Lys Ile Gln Ile Val Ser Gln Met Val Glu
 100 105 110
 Leu Val Glu Asn Arg Thr Arg Gln Val Asp Ser His Val Glu Leu Phe
 115 120 125

Glu Ala Gln Gln Glu Leu Gly Asp Thr Val Gly Asn Ser Gly Lys Val
 130 135 140
 Gly Ala Asp Arg Pro Asn Gly Asp Ala Val Ala Gln Ser Asp Lys Pro
 145 150 155 160
 Asn Ser Lys Arg Ser Arg Arg Gln Arg Asn Asn Glu Asn Arg Glu Asn
 165 170 175
 Ala Ser Ser Asn His Asp His Asp Asp Gly Ala Ser Gly Thr Pro Lys
 180 185 190
 Glu Lys Lys Ala Lys Thr Ser Lys Lys Lys Lys Arg Ser Lys Ala Lys
 195 200 205
 Ala Glu Arg Glu Ala Ser Pro Ala Asp Leu Pro Ile Asp Pro Asn Glu
 210 215 220
 Pro Thr Tyr Cys Leu Cys Asn Gln Val Ser Tyr Gly Glu Met Ile Gly
 225 230 235 240
 Cys Asp Asn Asp Glu Cys Pro Ile Glu Trp Phe His Phe Ser Cys Val
 245 250 255
 Gly Leu Asn His Lys Pro Lys Gly Lys Trp Tyr Cys Pro Lys Cys Arg
 260 265 270
 Gly Glu Asn Glu Lys Thr Met Asp Lys Ala Leu Glu Lys Ser Lys Lys
 275 280 285
 Glu Arg Ala Tyr Asn Arg
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<210> 13
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 <212> PRT
 <213> Homo sapiens

<400> 13
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 Glu Cys Val Glu Ser Leu Pro His Asp Met Gln Arg Asn Val Ser Val
 35 40 45
 Leu Arg Glu Leu Asp Asn Lys Tyr Gln Glu Thr Leu Lys Glu Ile Asp
 50 55 60
 Asp Val Tyr Glu Lys Tyr Lys Lys Glu Asp Asp Leu Asn Gln Lys Lys
 65 70 75 80
 Arg Leu Gln Gln Leu Leu Gln Arg Ala Leu Ile Asn Ser Gln Glu Leu
 85 90 95
 Gly Asp Glu Lys Ile Gln Ile Val Thr Gln Met Leu Glu Leu Val Glu
 100 105 110

Asn	Arg	Ala	Arg	Gln	Met	Glu	Leu	His	Ser	Gln	Cys	Phe	Gln	Asp	Pro
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	195						200					205			
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	210					215					220				
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Ser	Cys	Val	Ser	Leu	Thr	Tyr	Lys	Pro	Lys	Gly	Lys	Trp	Tyr	Cys	Pro
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<210> 16
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 <212> PRT
 <213> Rattus sp.

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<213> Mus musculus

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1 5 10 15

Asp Arg Phe Met Gln Asn Ser Cys Val Pro Lys Lys
20 25

<210> 18
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<212> PRT
<213> Mus musculus

<400> 18
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Leu Leu Gln Glu Thr Met Tyr Met Thr Val Ser
20 25

<210> 19
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<213> Mus musculus

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Val Gly Ile Thr Ala Leu Leu Leu Ala Ser Lys
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<210> 20
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<213> Mus musculus

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Leu Leu